Anaesthesia and pseudoseizures

Editor—We read with interest the case report from Drs Ng and Chambers,1 and would like to report two cases of pseudoseizures that illustrate some additional anaesthetic implications of this problem.

Case 1
A 48-yr-old female was scheduled for magnetic resonance imaging (MRI) under general anaesthesia because of claustrophobia. She had initially presented to the neurosurgeons with a 3 yr history of sensory disturbance on the right side of the face, and a 1 yr history of facial asymmetry and occasional headache. Her past history included rheumatic fever, thyroideectomy with consequent hypothyroidism, hypertension, and, of note, no history of epilepsy. Examination and investigations were unremarkable and a right retromastoid excision of a cerebellar pontine angle meningioma had been undertaken without event.

In view of the absence of significant concomitant disease, the postoperative MRI scan had been scheduled as a day case. Anaesthesia was induced with propofol and maintained with isoflurane in air and oxygen. On emergence, similar jerking movements occurred and, because of the unavailability of a neurosurgical bed, the patient was transferred to the Accident and Emergency department. An EEG was performed, this time during the ‘seizure’, and again was normal.

With simple supportive care, she improved spontaneously and was discharged. The MRI showed that the tiny nodule of residual tumour was unchanged from the initial postoperative scan. It may be appropriate to repeat the MRI in 3 yr time. Ng and Chambers1 suggest the use of simple anaesthetic techniques with minimum quantities of short-acting agents. As both anaesthetics that this patient received were minimal, should sedation rather than general anaesthesia be attempted?

Case 2
A 33-yr-old primagravida presented in labour to the obstetric unit of a district general hospital. She denied any past medical history or medication. Epidural analgesia was requested and this proceeded uneventfully. A midwife performed a normal vaginal delivery and the epidural infusion was discontinued. All observations were within normal limits. However, 3–4 h postpartum the patient appeared to lose consciousness and an apparent grand mal tonic clonic seizure ensued. This involved exaggerated head movements and asynchronous jerking of all four limbs. The obstetric registrar administered magnesium sulphate and anaesthetic assistance was sought. When the anaesthetist arrived, the seizure activity was continuing unabated. Because of the lack of clarity as regards the diagnosis and the continuing seizure activity in a patient at risk of pulmonary aspiration, her trachea was intubated and ventilation controlled artificially. This was facilitated by thiopental and succinylcholine. Similar seizure activity recurred shortly afterwards and midazolam and propofol sedation were administered. CT of the brain was normal and the patient was transferred to the intensive care unit where biochemical variables were confirmed as normal.

On contacting the patient’s partner, he was unconcerned and stated that the patient frequently experienced these episodes and that there was ‘nothing wrong’. He refused to communicate further as it was ‘late at night’. The patient had no further incidents and was haemodynamically stable overnight. Sedation was discontinued and the tracheal tube removed in due course, upon which she demanded to be sent back to the labour ward. The patient refused further follow-up or investigation and anaesthetic input into her care ceased.

On retrospective consideration, this patient’s seizure demonstrated features of pseudo-seizure activity. Unfortunately, her refusal to cooperate with investigation and follow-up, apparently due to adverse social circumstances, and the seeming lack of any previous neurological input preclude a proper diagnosis of psychogenic seizures.

The denial of any previous history combined with the pressure to secure the airway in a patient who was immediately postpartum probably led to unnecessary intubation and intensive care admission in this case—an unfortunate but recognized consequence of pseudoseizures.

These cases illustrate a number of anaesthetic implications:

(i) The inappropriate concern that an anaesthetic agent caused seizures.

in the right side of her face so, once again, an MRI scan was requested. On this occasion, the anaesthetist who had been present for the initial MRI scan was involved, and both the patient and relatives were warned of the possibility of admission should the seizure activity recur. As it was possible that propofol had been responsible for the seizure activity after the first scan, anaesthesia was induced with thiopental and maintained with sevoflurane in air and oxygen. On emergence, similar jerking movements occurred and, because of the unavailability of a neurosurgical bed, the patient was transferred to the Accident and Emergency department. An EEG was performed, this time during the ‘seizure’, and again was normal.

With simple supportive care, she improved spontaneously and was discharged. The MRI showed that the tiny nodule of residual tumour was unchanged from the initial postoperative scan. It may be appropriate to repeat the MRI in 3 yr time. Ng and Chambers1 suggest the use of simple anaesthetic techniques with minimum quantities of short-acting agents. As both anaesthetics that this patient received were minimal, should sedation rather than general anaesthesia be attempted?
(ii) The cancellation of investigations and surgery that require anaesthesia.
(iii) Unnecessary intubation and admission to intensive care particularly in the current climate when intensive care beds are scarce.
(iv) Unnecessary exposure of a patient to the risks of ventilator associated pneumonia and other complications of intensive care admission.
(v) Unnecessary exposure of a patient to radiation in the form of an unnecessary CT scan of the brain.
(vi) Anaesthetists may encounter pseudoseizure activity more commonly than is currently believed.

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Editor—We thank Drs Allen and Farling for their interest in our case report.1 Their experience reinforces the view that anaesthetists may be encountering varying degrees of pseudoseizures more often than is recognized, and we agree with the points raised. Whilst sedation may have a place in the management of certain patients with a history of pseudoseizures, it is well known that sedative drugs per se may provoke adverse psychotropic reactions.2 3

In the first case of the claustrophobic patient undergoing MRI scanning, our choice would be to provide general anaesthesia rather than sedation. MRI scanning takes time to complete and sedation carries the inherent risk of a ‘seizure’ occurring in a magnetized, isolated area. A general anaesthetic would provide more control and any seizure activity on emergence could be more easily managed in a recovery area.

Their second case report is interesting as the differential diagnosis includes eclampsia. It shows that pseudoseizures may be provoked in a susceptible patient by a range of acutely stressful situations, including labour and delivery. We feel that an awareness of this condition amongst anaesthetists and other medical staff, along with attention to the previous medical history and observation of the fits, are the key to making an early diagnosis and establishing appropriate management.

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